

Supplemental Reply
U.S. Serial No. 09/019,441
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Remarks

Reconsideration and re-examination of the subject application, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follows, are respectfully requested.

By the present amendment, the specification has been amended to delete the sequence that was incorrectly identified as SEQ ID NO:13. This deletion is appropriate as this sequence is not necessary for an understanding of the invention. This shall obviate the remaining issue raised in the January 29, 2001 Official Action.

Also, Claim 1 has been amended to recite that the constant region is that of either a human gamma-1 or gamma-3 monoclonal antibody. Claims 3 and 40 therefore have been cancelled. This amendment is made to expedite grant.

It is noted that in the earlier April 25, 2000 Official Action, all but Claim 12 were rejected on prior art grounds. These rejections are respectfully traversed.

Claims 1-9, 13-22 and 40-41 stand rejected under 35 U.S.C. §102(a) based on Bonnefoy et al. and Saxon et al. This rejection is respectfully traversed.

At the outset, it is respectfully submitted that Bonnefoy et al., at best, should have been applied under §103, obviousness grounds, not §102, as it fails to teach any particular anti-CD23 antibody meeting the claims limitations. Rather, it merely prophetically mentions chimeric antibodies. Moreover, this is among a listing of potential binding agents including recombinant and non-recombinant antibodies, fragments, mimetics, peptides, etc. In fact, no chimeric anti-human CD23 antibodies of the gamma-1 or gamma-3 isotope are actually exemplified or suggested to be in any way beneficial vis-à-vis other CD23 binding molecules. In this regard, the patent contains no claims directed to anti-human CD23 monoclonal antibodies that comprise human gamma-1 or gamma-3 constant domains.

Turning now to the potential obviousness issue, Applicants respectfully maintains that this rejection cannot be sustained based on the unexpected results achieved by the subject antibodies. While the Examiner is quite correct in her assessment that Saxon et al. demonstrates that anti-CD23 antibodies can inhibit IgE expression, it could not have been reasonably predicted that such inhibiting activity would correlate to the presence or absence of particular human constant domains. In fact, as discussed in the application, the state of the

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prior art known to Applicants would have suggested that the presence of constant regions would have had no effect on IgE inhibition. Particularly, Flores Romo et al. had reported in *Science*, 261:1038-1041 (1993), that Fabs were capable of inhibiting IgE antigen-specific responses comparably to intact antibodies. Hence, there would have been no reason to produce a chimeric antibody as claimed because the reasonable expectation would have been that it would not affect the desired function (IgE inhibition) and potentially would unnecessarily increase costs associated with antibody manufacture.

In fact, the present inventors have quite surprisingly discovered that the presence of human constant domains is highly significant to IgE inhibition. This is based on a comparison of two primate antibodies to otherwise comparable human constant domain containing antibodies (see discussion at pp. 17-18 of disclosure). This is surprising, especially based on previous theories as to how anti-CD23 modulates IgE expression which theories are independent of effective function.

Claims 1, 5-9, 13-14, 17-22 and 25 also stand rejected as allegedly being anticipated by Newman et al., U.S. Patent 5,658,570, as evidenced by Saxon et al. This anticipatory rejection is respectfully traversed on the basis that the Newman patent (by IDEC Pharmaceuticals, the Assignee of this application) contains no specific teachings with respect to the production of anti-human CD23 monoclonal antibodies that contain human constant domains of human gamma-1 or gamma-3 monoclonal antibodies.

Likewise, the patent does not render obvious the claimed antibodies or pharmaceutical compositions containing. Also, even if the reference suggested such antibodies broadly, the rejection should be withdrawn based on the unexpected results achieved by the invention.

Applicants respectfully maintain that it could not have been reasonably predicted, nor was it obvious, that a human gamma-1 or gamma-3 anti-human CD23 monoclonal antibody would inhibit IgE production better than an otherwise equivalent anti-human CD23.

Claims 1-11, 13-25, 40 and 41 stand rejected under §103(a) based on Queen et al., U.S. Patent 5,585,089, in view of Saxon et al. This rejection is respectfully traversed.

Queen et al. is cited based on its teaching and disclosure relating to humanized antibodies and their intrinsic advantages, e.g. less immunogenic than their humanized

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versions, and Saxon et al. is cited based on its disclosure relating to anti-CD23 antibodies and their therapeutic potential.

However, neither reference renders the subject monoclonal antibodies obvious given the unexpected discovery made by the inventors, namely that the presence of particular human constant domains significantly enhances IgE inhibiting activity.

Also, this rejection should be withdrawn as it is directly inconsistent with the issuance of U.S. Patent 6,011,138. In fact, the Queen et al. patent relating to humanization was of record therein as was the Saxon reference. However, based on substantially the same arguments as set forth herein, the Examiner vacated such rejection as she agreed that the effect of the human constant domains on IgE inhibiting activity are truly unexpected and not suggested by Queen et al. or Saxon et al.

Finally, Claims 1-25, 40 and 41 stand rejected on double patenting grounds based on the claims of U.S. Patent 6,011,138. This rejection is obviated by the Terminal Disclaimer provided herewith.

Also, Claims 1-25 and 40-41 stand provisionally rejected based on the claims of co-pending Serial No. 09/292,053. The Examiner is respectfully requested to hold this rejection in abeyance until this application is otherwise allowable. At that time, a Terminal Disclaimer will be submitted if still necessary.

If the Examiner has any questions relating to this Application, or any other matter herein, she is respectfully requested to contact the undersigned attorney so that prosecution may expedited.

Respectfully submitted,

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